

DoD Unique Identification (UID)

Ms. LeAntha Sumpter



Agenda

Time	Topic	Speaker
1:00-1:15	Greeting and Introduction	Ms. LeAntha Sumpter, UID Program Office
1:15-2:00	UID: The Basics	Mr. Rob Leibrandt and Mr. D. Bruce Probert, UID Program Office
2:00-2:30	UID Policy Hot Topics	Ms. LeAntha Sumpter
2:30-3:00	UID Benefits to Industry	Mr. Lynn Butler, UID Program Support
3:00-3:30	UID Applications and Pilot Efforts	Mr. Chris Sautter, CH-47 and Mr. Gerald Allen, Rolls-Royce
3:30-4:00	Wide Area Work Flow and the UID Registry	Mr. D. Bruce Probert
4:00-5:00	Frequently Asked Questions	Panel of Experts
5:00-7:00	Exhibits and Reception	

UID: The Basics



UID: What Is It?



In today's world, many items we buy have identification on them that indicate the manufacturer or distributor of the product and the product type (e.g., 12oz can of Coca-Cola Classic)

Two identical cans of Coke from the same bottling plant will show the same data on the Universal Product Code (UPC)



Some items also have a serial number that differentiates one item from another identical item (e.g., the 24th engine off the assembly line is different from the 1024th)

Serial numbers are unique, but not outside of their enterprise – the serial number assigned by XYZ Manufacturer could be the same as one assigned by ABC Company



By combining enterprise identification, item class and serialization, a globally unique item identifier is created that differentiates each item from other items

Each item has its own globally unique identifier (UID)



UID: Why Do It?

- ✓ To achieve a lower cost of item management as a result of being able to consistently capture the value of items purchased, control items during their use, and combat counterfeiting of parts
- ✓ To improve item availability and reduce frustrated freight as a result of an increased availability of data, more efficient item management, and increased asset visibility
- ✓ To improve long term inventory management and strategic purchasing as a result of more accurate and available data
- ✓ To achieve clean audit opinions on the Property, Plant, and Equipment and Operating Materials and Supplies Portions of DoD Financial Statements



UID: How is it Constructed?

The UID is created by combining two or three data elements that are commonly marked on items already: Enterprise Identifier, Part Number, and Serial Number

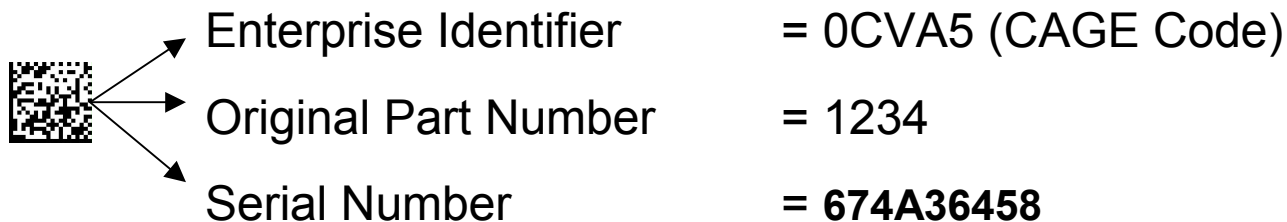
	UID Construct #1	UID Construct #2
Based on current enterprise configurations	If items are serialized within the Enterprise Identifier	If items are serialized within the Part Number
UID is derived by concatenating the data elements IN ORDER:	Issuing Agency Code* + Enterprise ID + Serial Number	Issuing Agency Code* + Enterprise ID + Original Part Number + Serial Number
*The Issuing Agency Code (IAC) represents the registration authority that issued the enterprise identifier (e.g., Dun and Bradstreet, EAN.UCC). The IAC can be derived from the data qualifier for the enterprise identifier and does not need to be marked on the item.		



UID: How is it Constructed?

The UID shall be derived from its discrete component data elements – the UID is not required to be marked on the item as a separate data element

From the Data Matrix:

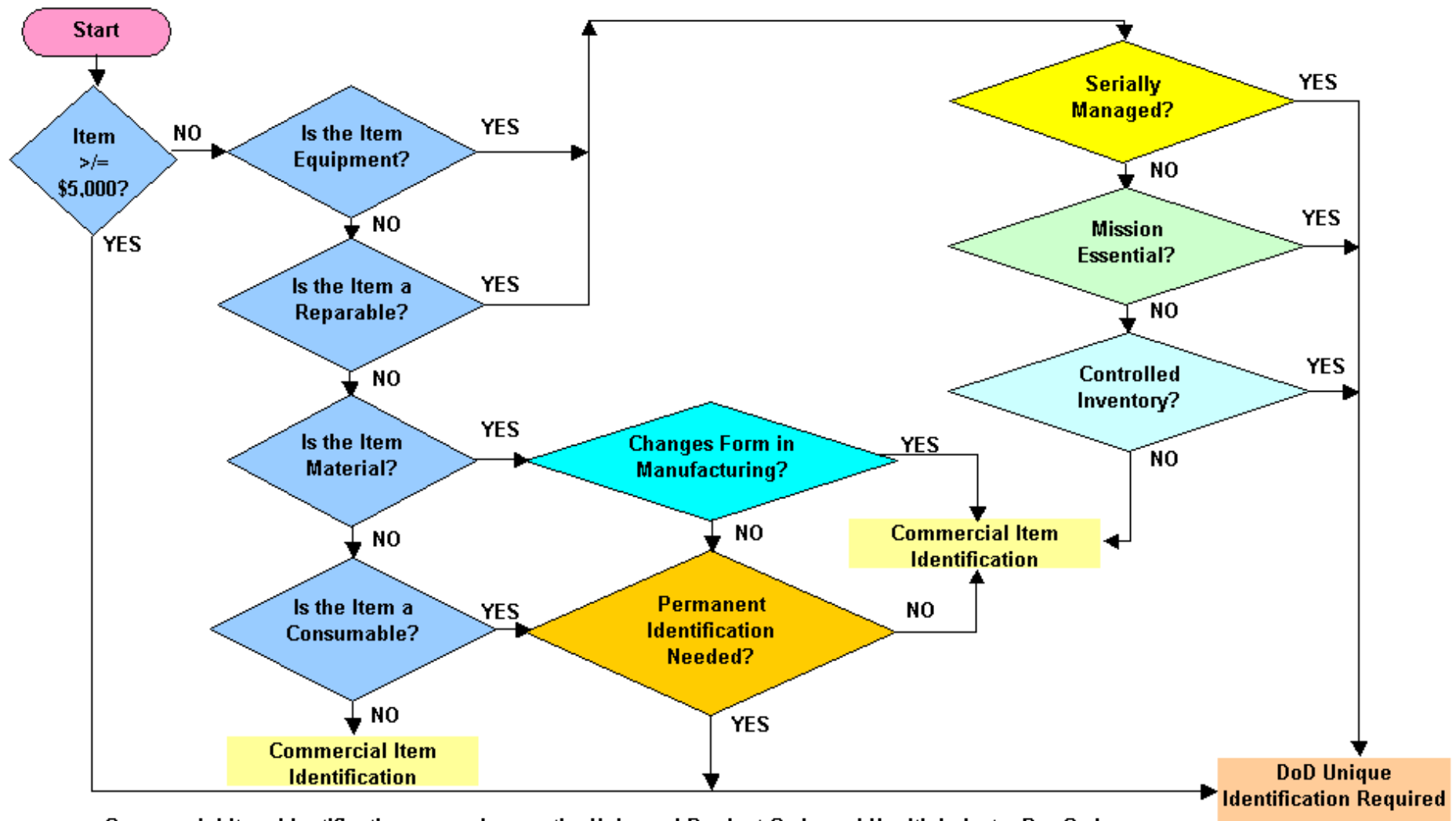


The UID can be derived using the IAC for CAGE, which is “D”:

UID Construct 1	UID Construct 2
<i>If the Serial Number is Unique within the Enterprise Identifier</i>	<i>If the Serial Number is Not Unique within the Enterprise Identifier but is Unique within the Part Number</i>
D0CVA5674A36458	D0CVA51234674A36458



What Items Need a UID?





UID: Encoding the Data

- ◆ The 2-D Data Matrix ECC 200 is required for UID items, as specified in MIL-STD-130L (or later version)
- ◆ Since the 2-D Data Matrix symbol is not readable by the human eye, the data has to be encoded into a standard format so that scanners or imagers can read the data consistently and accurately
- ◆ The standard for the syntax used to encode the data is ISO/IEC 15434, Transfer Syntax for High Capacity ADC Media
- ◆ Different groups use different standards to label the data that is found in the symbol - the three standards for labeling data that will be accepted by DoD include:
 - ◆ Application Identifiers (maintained by UCC.EAN, found in ISO/IEC 15418)
 - ◆ Data Identifiers (maintained by ANSI MH10, found in ISO/IEC 15418)
 - ◆ Text Element Identifiers (maintained by ATA, found in the ATA Common Support Data Dictionary)



UID: Other Requirements

The UID policies and changes to the Defense Federal Acquisition Regulation Supplement (DFARS) create the following additional requirements for suppliers to DoD:

- ◆ At a minimum, use a 2-D Data Matrix ECC 200 to carry the UID data elements (either instead of or in addition to the currently used bar code)
- ◆ The contractor shall deliver all items under a contract line, subline, or exhibit line item
- ◆ The contractor is required to transmit, upon shipment notification, UID database data in addition to the data in the Data Matrix symbol



UID: Acquisition Regulation

- ◆ The contractor shall deliver all items under a contract line, subline, or exhibit line item
- ◆ “Item” is defined as a single hardware article or unit formed by a grouping of subassemblies, components or constituent parts
- ◆ The requiring activity determines the necessity for UID for items with a unit acquisition cost less than \$5,000
- ◆ The requiring activity determines whether to require a UID for subassemblies, components, and parts embedded within an item regardless of dollar value
- ◆ Subassemblies, components and parts embedded within an item will be identified in a CDRL or other exhibit (see the Data Item Description for Use in Preparing the DD1423 (CDRL) at www.acq.osd.mil/uid)
- ◆ Requirements for UID and acquisition cost determination will be passed on from prime to subcontractors



UID: Database Data Transmission

The contractor is required to transmit, upon shipment notification, UID database data in addition to the data in the Data Matrix symbol and in addition to any data previously required during shipment notification

Database data required for UID includes:

End Item Database Data (15)

- ◆ **UID (Concatenated)** ←
- ◆ Descriptive Data
 - UID Data Elements (3)
 - Issuing Agency Code
 - UID Type
 - Item Description
 - Unit of measure
- ◆ Acquisition Data
 - Contractor
 - Contract Number
 - CLIN/SLIN/ELIN
 - Price
 - Acceptance Code (identifies acceptor)
 - Acceptance Date
 - Ship to code

Embedded Items of End Items (10)

- ◆ UID (Concatenated)
- ◆ Descriptive Data
 - UID Data Elements (3)
 - Issuing Agency Code
 - UID Type
 - Item Description
 - Unit of measure
- ◆ **Parent UID as of delivery date**
- ◆ GFP flag



UID: Why Now?

- ◆ According to the General Accounting Office (GAO), the Department of Defense:
 - ◆ Lacks complete and reliable information for reported inventory and cannot substantiate the current level of reported inventory
 - ◆ Inventory exceeds current operating requirements but lacks key spare parts, particularly aviation spares
 - ◆ The problem is primarily due to a lack of adequate accountability over material shipments and ineffective monitoring of defective spare parts
- ◆ Existing regulations call for improved financial management, greater accountability and reduced costs of inventory management:
 - ◆ Chief Financial Officers Act (1990)
 - ◆ Government Performance and Results Act (1993)
 - ◆ Government Management Reform Act (1994)
 - ◆ Federal Financial Management Improvement Act (1996)



Communication and Outreach

- ◆ Training materials for distance learning modules are currently under development with the Defense Acquisition University (DAU)
- ◆ Many information papers and resource materials are available on the UID website at www.acq.osd.mil/uid
- ◆ Industry and professional associations are engaged such as Air Transport Association (ATA), Aerospace Industries Association (AIA), National Defense Industrial Association (NDIA), and Government Electronics and Information Technology Association (GEIA)
- ◆ Efforts are underway to reach international associations and increase involvement by international Ministries of Defence
- ◆ Current international involvement to date:
 - UK
 - Canada
 - Korea
 - Australia
 - France
 - Sweden
 - Italy
 - Germany
 - NATO Allied Committees
 - 21 Nation Memorandum of Understanding (MOU) Group



Communication and Outreach

Communication and Outreach Events

- | | |
|--|--------------------|
| ◆ Joint Aeronautical Commanders Group (JACG) | - 14 April 2004 |
| ◆ Navy Acquisition Excellence Council | - 21 April 2004 |
| ◆ GEIA Conference | - 20-22 April 2004 |
| ◆ RVSI Conference | - 22 April 2004 |
| ◆ National Contract Management Association (NCMA) World Congress | - 26-28 April 2004 |
| ◆ MoD/DoD Discussions – UID Collaboration | - April 2004 |
| ◆ Manufacturers Alliance (MAPI) Conference | - 6 May 2004 |
| ◆ DoD Procurement Conference | - May 2004 |
| ◆ UCC Connect | - May 2004 |
| ◆ International Council on Systems Engineering (INCOSE) | - June 2004 |

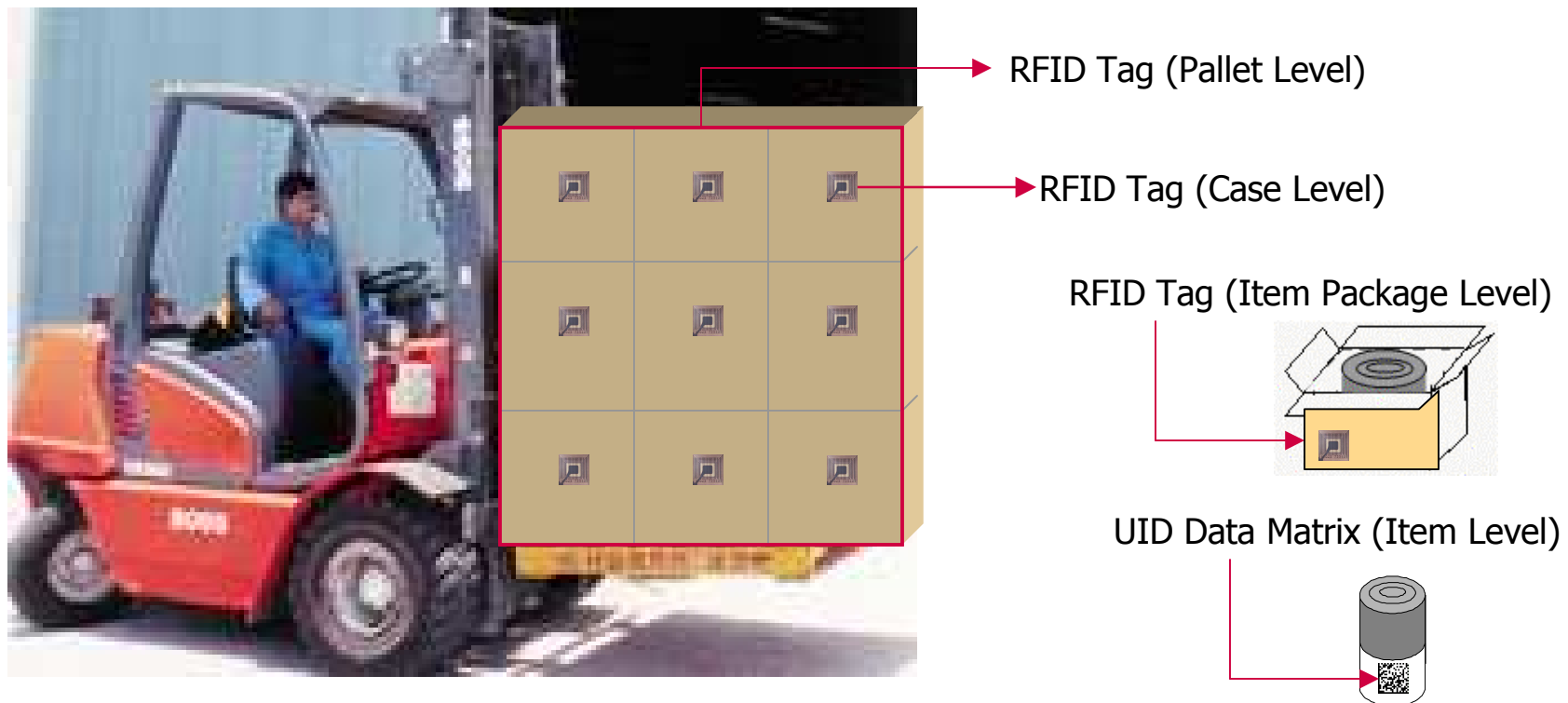
A summary of all past communication and outreach events is available on the UID website: www.acq.osd.mil/uid

UID Policy Hot Topics



UID-RFID Policy Relationship

According to current DoD Policy, RFID tags that carry data are required to be attached to packages at multiple levels, including item packages, cases, and pallets. Unique Identifiers are required to be attached or directly marked on items using a data matrix to carry the UID data elements.





UID-RFID Database Data Relationship

End Item Database Data (15)

- ◆ UID (Concatenated)
- ◆ Descriptive Data
 - UID Data Elements (3)
 - Issuing Agency Code
 - UID Type
 - Item Description
 - Unit of measure
- ◆ Acquisition Data
 - Contractor
 - Contract Number
 - CLIN/SLIN/ELIN
 - Price
 - Acceptance Code (identifies acceptor)
 - Acceptance Date
 - Ship to code

Embedded Items of End Items (10)

- ◆ UID (Concatenated)
- ◆ Descriptive Data
 - UID Data Elements (5)
 - Item Description
 - Unit of measure
- ◆ Parent UID as of delivery date
- ◆ GFP flag

RFID Data at the Pallet Level

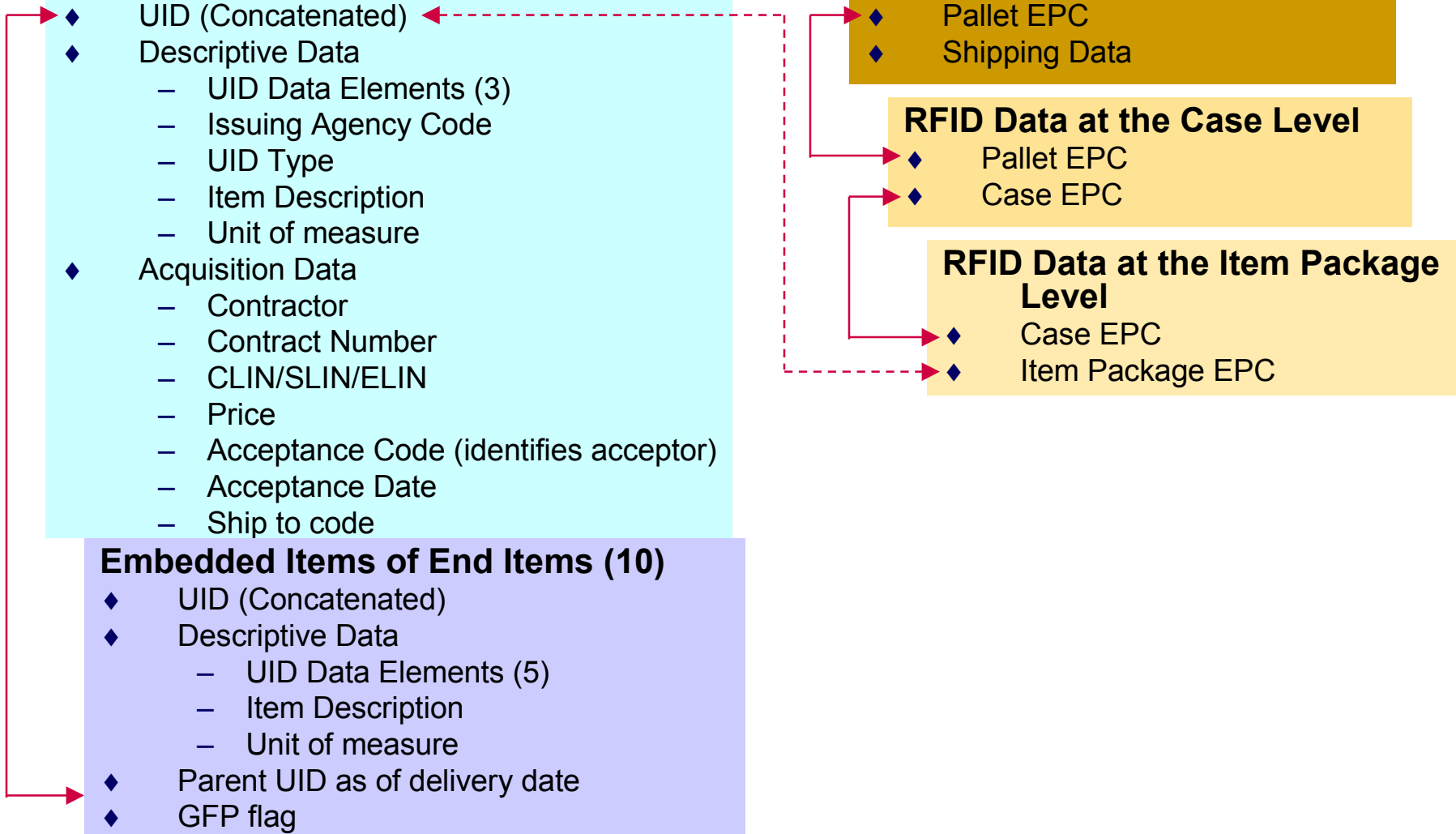
- ◆ Pallet EPC
- ◆ Shipping Data

RFID Data at the Case Level

- ◆ Pallet EPC
- ◆ Case EPC

RFID Data at the Item Package Level

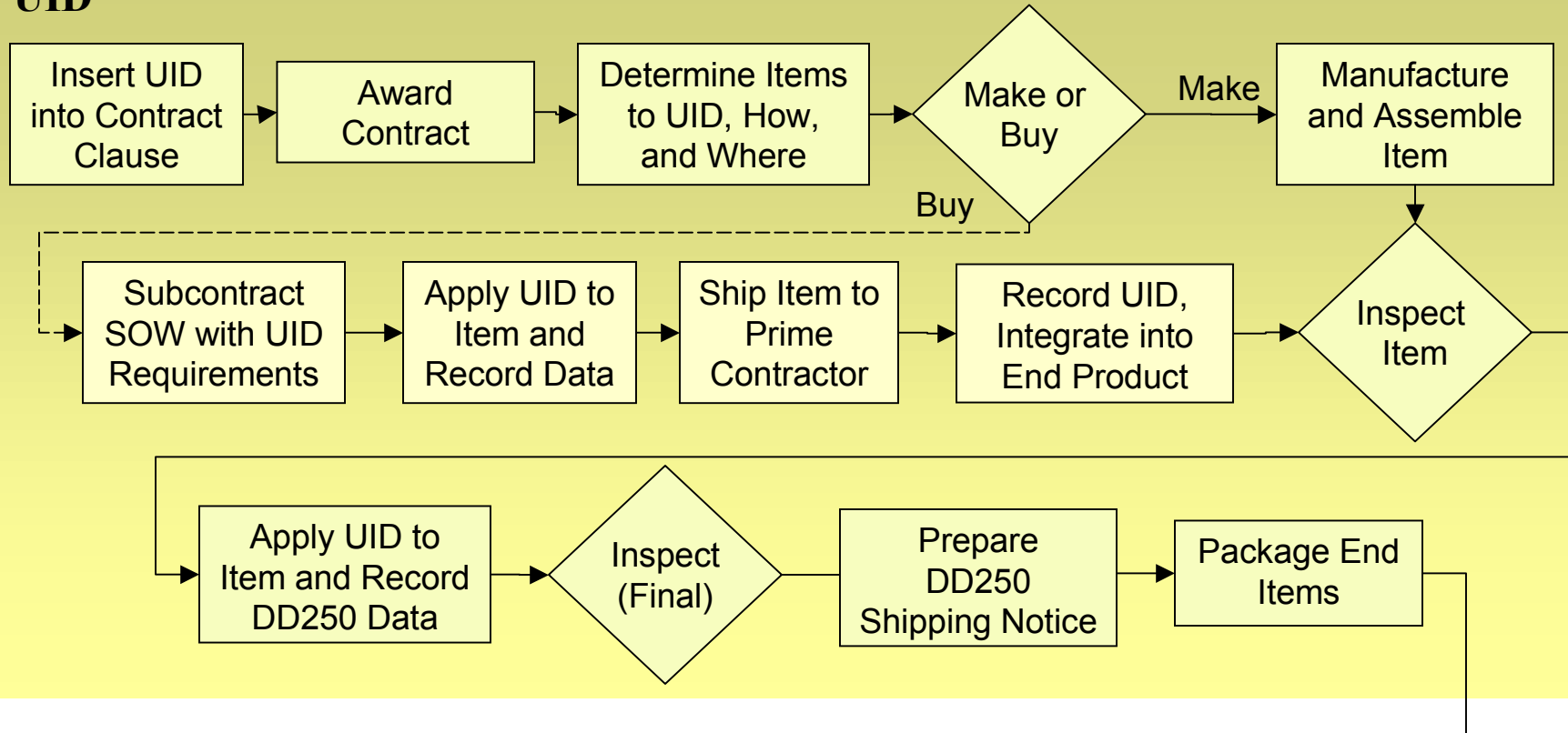
- ◆ Case EPC
- ◆ Item Package EPC



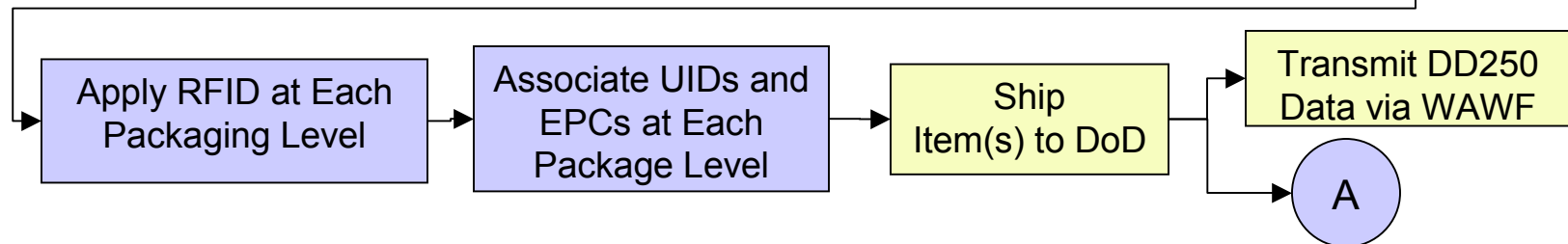


UID-RFID Process Relationship

UID



RFID





Other Ongoing Efforts

- ◆ Define the enterprise-wide uses for the UID Registry
- ◆ Identify opportunities/methods to integrate UID into ERP systems
- ◆ Integrate UID and RFID requirements where possible to lower the overall cost to implement both programs (e.g., aligning MIL-STD 129 and MIL-STD 130)
- ◆ Build support for the use of a consistent acquisition data capture process and tool (i.e., Wide Area Work Flow)
- ◆ Identify Business Process Reengineering opportunities
- ◆ Coordinate the implementation of emerging military and intra-DoD UID policies and programs
- ◆ Share ideas with Industry to promote a future integrated data environment for a “paperless” Government Furnished Property management process
- ◆ Develop alternate strategies for implementing UID in legacy programs
- ◆ Document and share lessons learned from implementation efforts



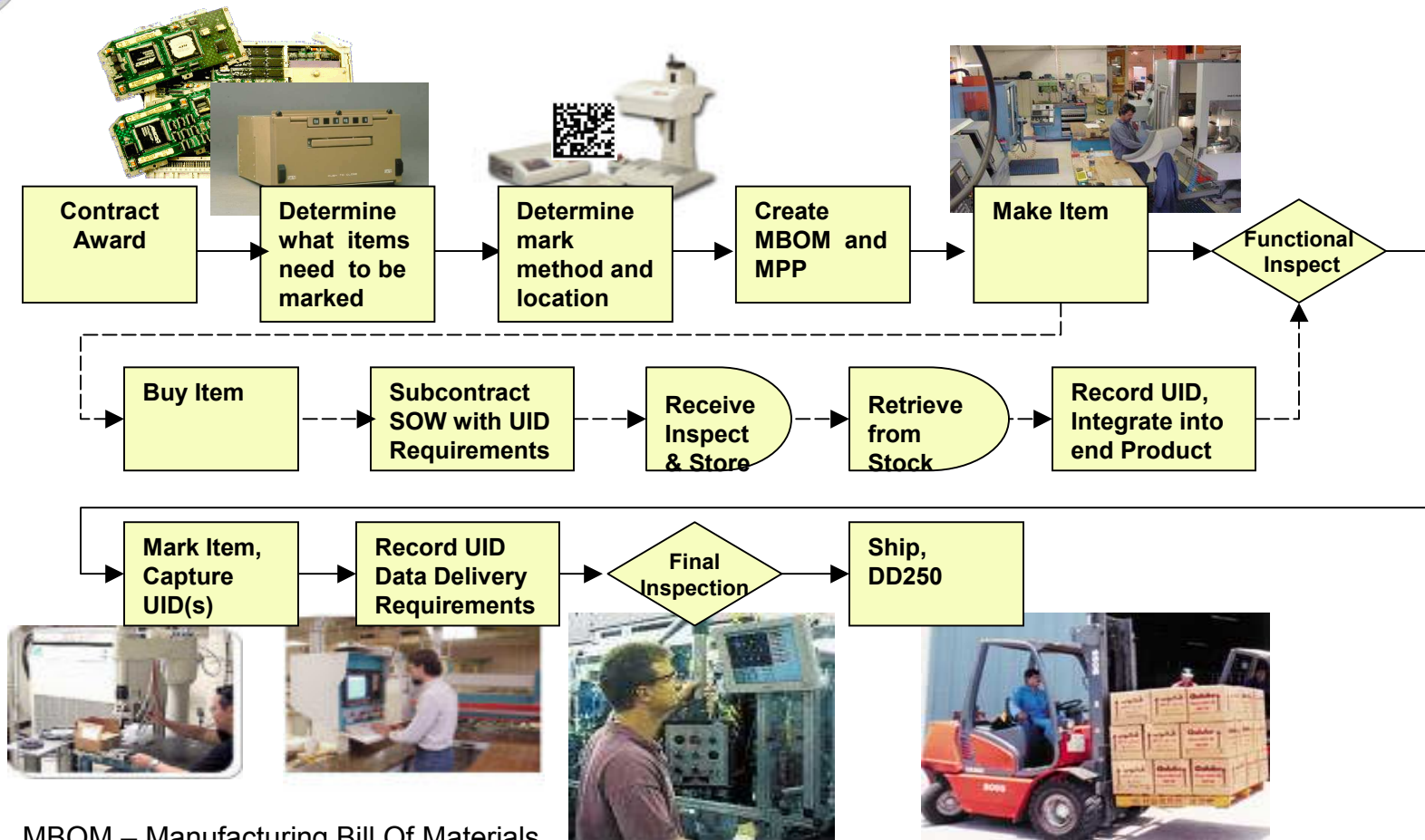
Future Challenges

- ◆ Ensure that price/cost paid is recorded in the UID Registry
- ◆ Embed CFO Accountability into outsourced Contractor Logistics Support
- ◆ Capture asset acquisition from intra-government sources such as grants and cooperative agreements
- ◆ Develop business rules for:
 - Foreign Military Sales
 - International Use
 - Demilitarization
 - Loss, Destruction, and Expenditure
 - Disposal

UID Benefits to Industry



UID Vendor Perspective



MBOM – Manufacturing Bill Of Materials
MPP – Manufacturing Process Planning

Issue: Existing marking processes must be able to accommodate UID requirements.
Impact: Existing investments in marking infrastructure are leveraged.



Benefits to Industry

- ◆ UID establishes a common key for sharing digital data as well as replacement parts across several enterprises, both suppliers and customers, global and domestic
- ◆ As a result of sharing more data across the supply chain, over time operational efficiency for all supply chain partners will increase (e.g., Lower administrative costs to gather and/or reconcile data)
- ◆ Improvements in the ability to track, value, and control items apply to a prime contractor that purchases items from a subcontractor (*similar to the benefits that DoD will get from its suppliers*)
 - Improved failure analysis within vendor supply chain
 - Improved returns tracking to specific-item level
- ◆ UID creates a necessity for standardized item serialization throughout every organization (if not currently done)
- ◆ More data can be stored in a 2-D Data Matrix with a higher probability of accurate readings

UID Applications and Pilot Efforts

CH-47 UID “Legacy” Implementation

Rolls-Royce UID Implementation



Automatic Data Collection

Auto ID Initiatives

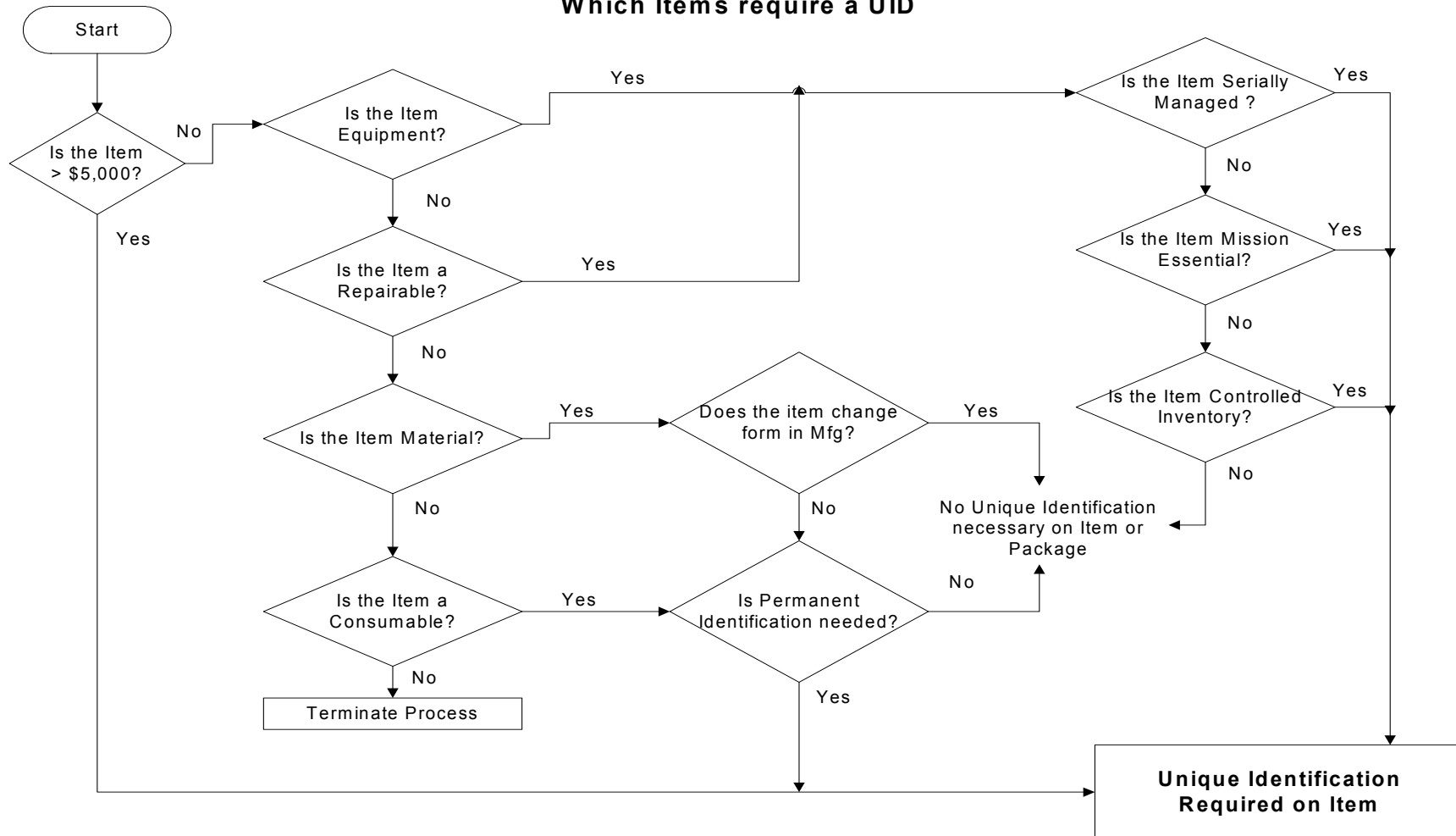
- ◆ These are related but distinct programs
 - ✓ DPM (Direct Part Marking) – A permanent 2D Data Matrix, or 1D bar code marking directly applied to a part for tracking engine components throughout their life-cycle.
 - ✓ UID (Unique Item Identification) – A combination of data elements, unambiguous, and robust enough to ensure data information quality throughout it's life.
 - ✓ RFID (Radio Frequency Identification) – A microchip embedded in the product, packaging or label.
 - ✓ WAWF (Wide Area Workflow) – An automated system that allows vendors to electronically submit invoices and receiving reports, and allows the Government to inspect, accept, receive, and pay electronically.



Identifying Items that Require UID

UID Requirement - Decision Chart

Which Items require a UID





Notice to Suppliers (NTS)

- ◆ Review your component specifications and understand what changes will be required to implement data matrix marking
 - ◆ Vibro peen will NOT be acceptable for FINAL part marking.
- ◆ Review and understand the optimum marking process for your parts
- ◆ Review your options
 - ◆ Sub contract marking?
 - ◆ Alternative marking processes
 - ◆ Drawing alteration.....
- ◆ Develop plans to implement Direct Part Marking NOW
- ◆ Investment 'may' be required
- ◆ Implementation is NOT optional

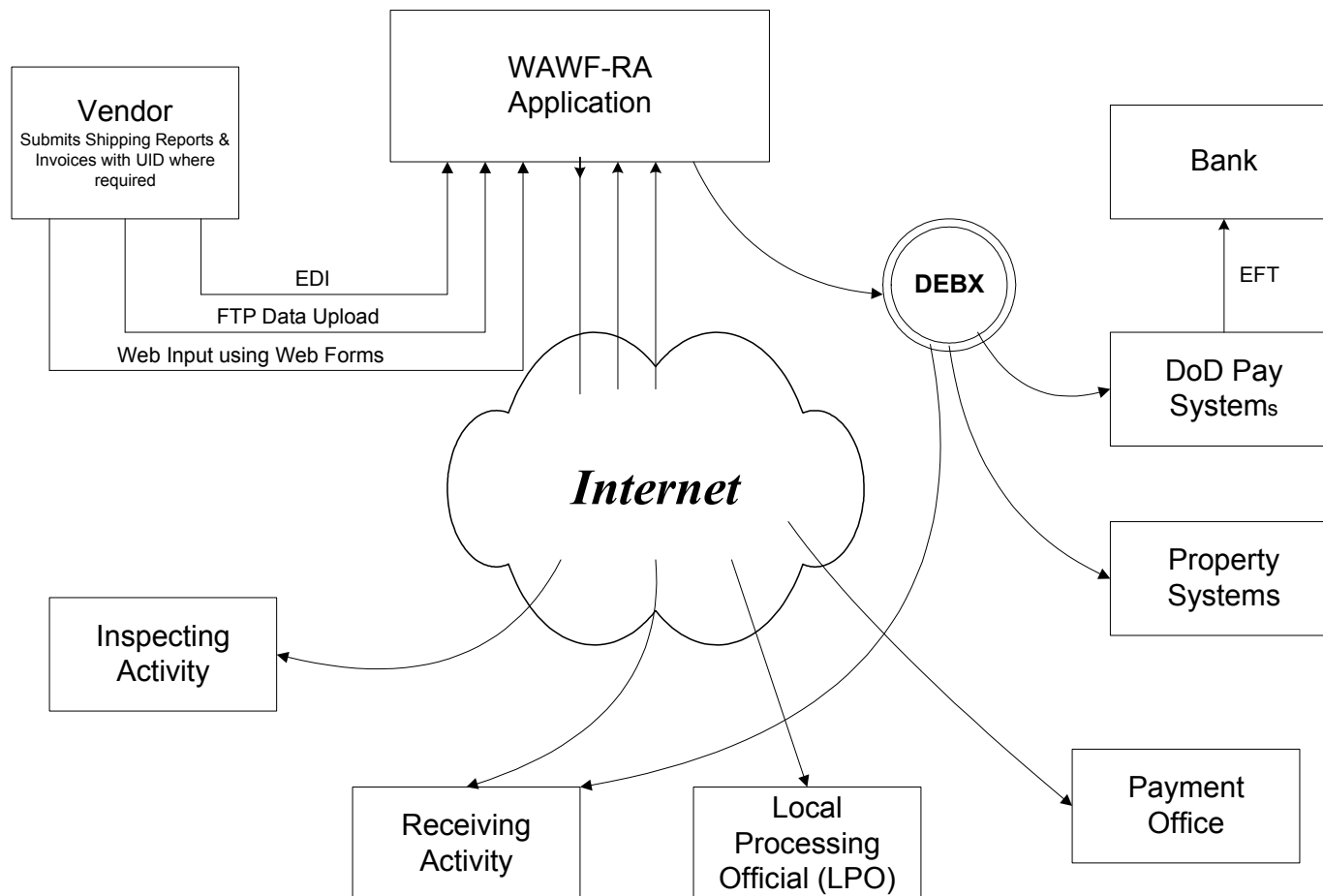


UID Policy Impact on Rolls-Royce

- ◆ DoD 2-D marking specification requirement (as invoked through Mil Std 130L) is a significant change
- ◆ Rolls-Royce and industry cannot afford to implement dual or multiple marking specs IAW ISO 15434 and ATA Spec 2000
- ◆ Rolls-Royce is working with DoD, the Aerospace Industries Association (AIA) and the Air Transport Association (ATA) to agree on a converged standard between the ATA Spec 2000 and ISO 15434 formats
- ◆ Rolls-Royce must revise it's corporate specification by July/Aug to meet the DoD UID policy requirements through out it's supply chain.



Transmitting UID Data



Defense Electronic Business Exchange (DEBX) sends UIDs to receiving activity system



Getting Started

- ◆ Establish an Implementation Team
- ◆ Become familiar with the DFARS Policy and supporting material.
- ◆ Establish a POC
- ◆ Schedule regular meeting sessions
- ◆ Establish effective communication channels
- ◆ Attend sessions on UID, DPM, WAWF, and RFID
- ◆ Keep the organization informed



Where to Find Additional Info

- ◆ UID Web Site – <http://www.acq.osd.mil/uid/>
- ◆ Mil Std 130L (10 October 2003)
- ◆ DoD Guide to Uniquely Identifying Items
- ◆ Mil Std 129P -
<http://www.dsccl.dla.mil/offices/packaging/specstdslist.html#STDs>)
- ◆ WAWF – <https://wawf.eb.mil>
- ◆ WAWF Training web site – www.wawftraining.com

START PLANNING NOW and GET INVOLVED

Wide Area Work Flow & UID Registry



What is WAWF-RA?

- ◆ Wide Area Work Flow-Receipts and Acceptance (WAWF-RA) is a DoD-wide application designed to eliminate paper from the receipt and acceptance process of the DoD contracting lifecycle.
- ◆ The goal is to enable authorized Defense contractors and DoD personnel to create invoices and receiving reports and access contract related documents electronically.

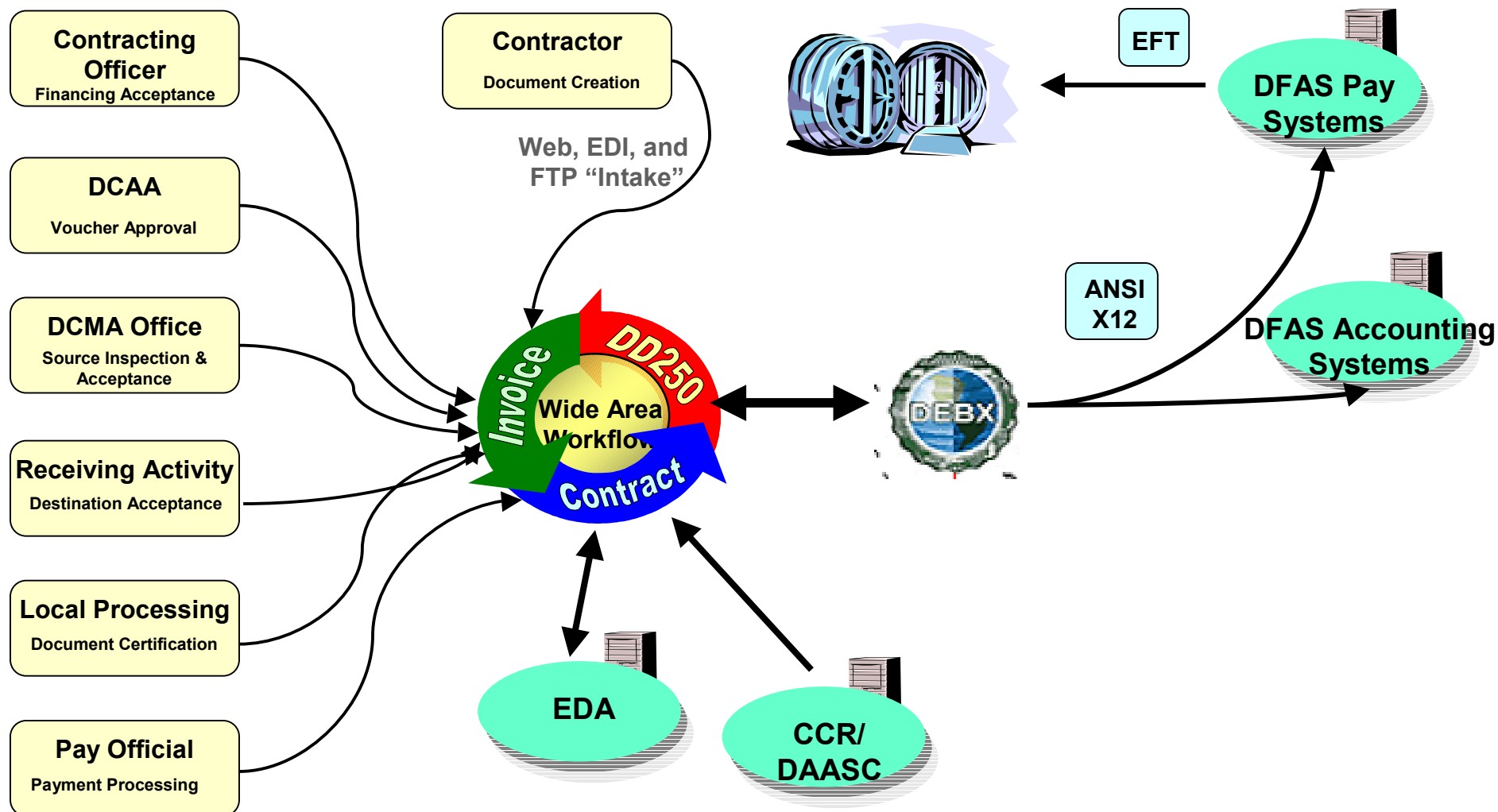


DFARS & WAWF-RA

- ◆ DFARS has been updated to include a requirement for electronic invoicing, effective for contracts issued on or after 01 March 2003
- ◆ Clause 252.232-7003 (232.7004):
 - ◆ Requires electronic invoicing
 - ◆ Requires electronic supporting documentation
 - ◆ Identifies three acceptable electronic forms for transmission of payment requests; and
 - ◆ Identifies six specific situations where using electronic methods is not required.
- ◆ Clause 252.246-7000 states WAWF-RA fulfills the requirement for Form DD250



Wide Area Workflow v3.0x



Email notices sent to next workflow user



Who Will Benefit?

Government

- ◆ Electronically record the inspection and acceptance of goods & services
- ◆ 24/7 document access and status check
- ◆ Real-time processing
- ◆ Reduced risk of lost or misplaced documents
- ◆ Reduced re-keying and improved accuracy of data
- ◆ Secure transactions with audit capability
- ◆ Reduce late interest penalties
- ◆ Maximize vendor discounts

Vendors

- ◆ Submit documents electronically
- ◆ 24/7 document access and status check
- ◆ Immediate feedback when the government rejects a document
- ◆ Ability to correct and resubmit documents online
- ◆ Faster processing time
- ◆ Secure transactions with audit capability
- ◆ No transaction fees



WAWF Deployment

- ◆ Wide Area Work Flow (WAWF) will be the standardized data capture mechanism for transmitting UID data from contractors to DoD
- ◆ Mission: Ensure maximum WAWF deployment and implementation based on the functionality of the system and security constraints
- ◆ **Goal:** 51% of all transactions by 1 October 2004

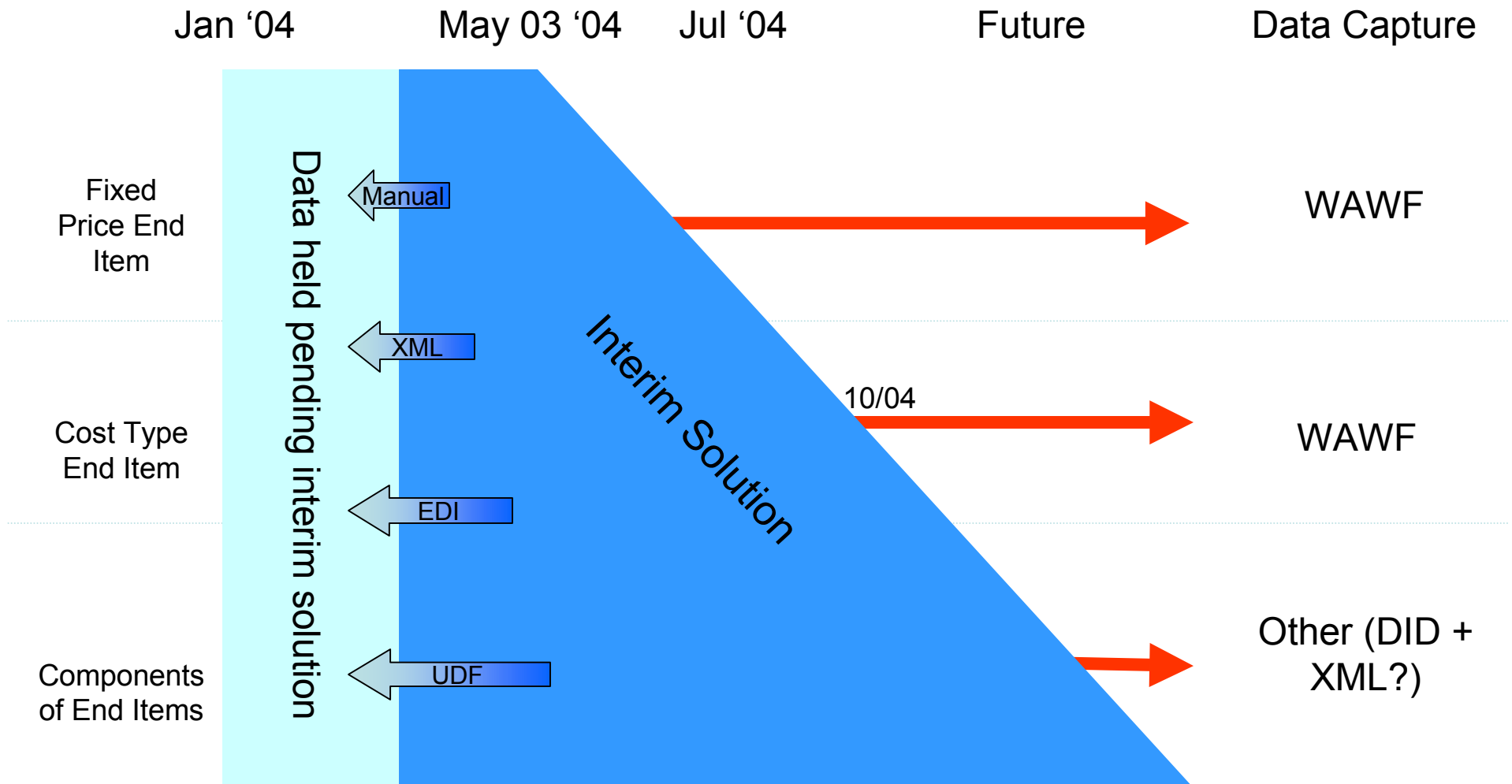


Interim State - Definition

- ◆ The UID data capture process to be utilized while full system capability is developed, implemented, and adopted.
- ◆ Four options for UID data submission – post acceptance:
 - Web entry
 - XML
 - EDI (based on to-be WAWF format)
 - UDF (based on to-be WAWF format)
- ◆ Interim Solution used when:
 - Cost type contract
 - Vendor or Government Acceptor not yet on WAWF
 - Other future collection scenarios (depots, charge card, etc)



Interim UID Timeline





Progress to Date

- ◆ WAWF
 - Design complete
 - Operational Acceptance Testing in progress
 - Vendor Guides for electronic submission drafted
- ◆ X12 standards for vendor submission
 - Extended to accommodate UID data
 - 856 Ship Notice and 857 Shipment and Billing Notice v4010
 - Currently in Standards Management Committee Review
- ◆ UID XML Schema defined
- ◆ DEBX/GEX
 - Design complete
 - Operational Acceptance Testing in progress

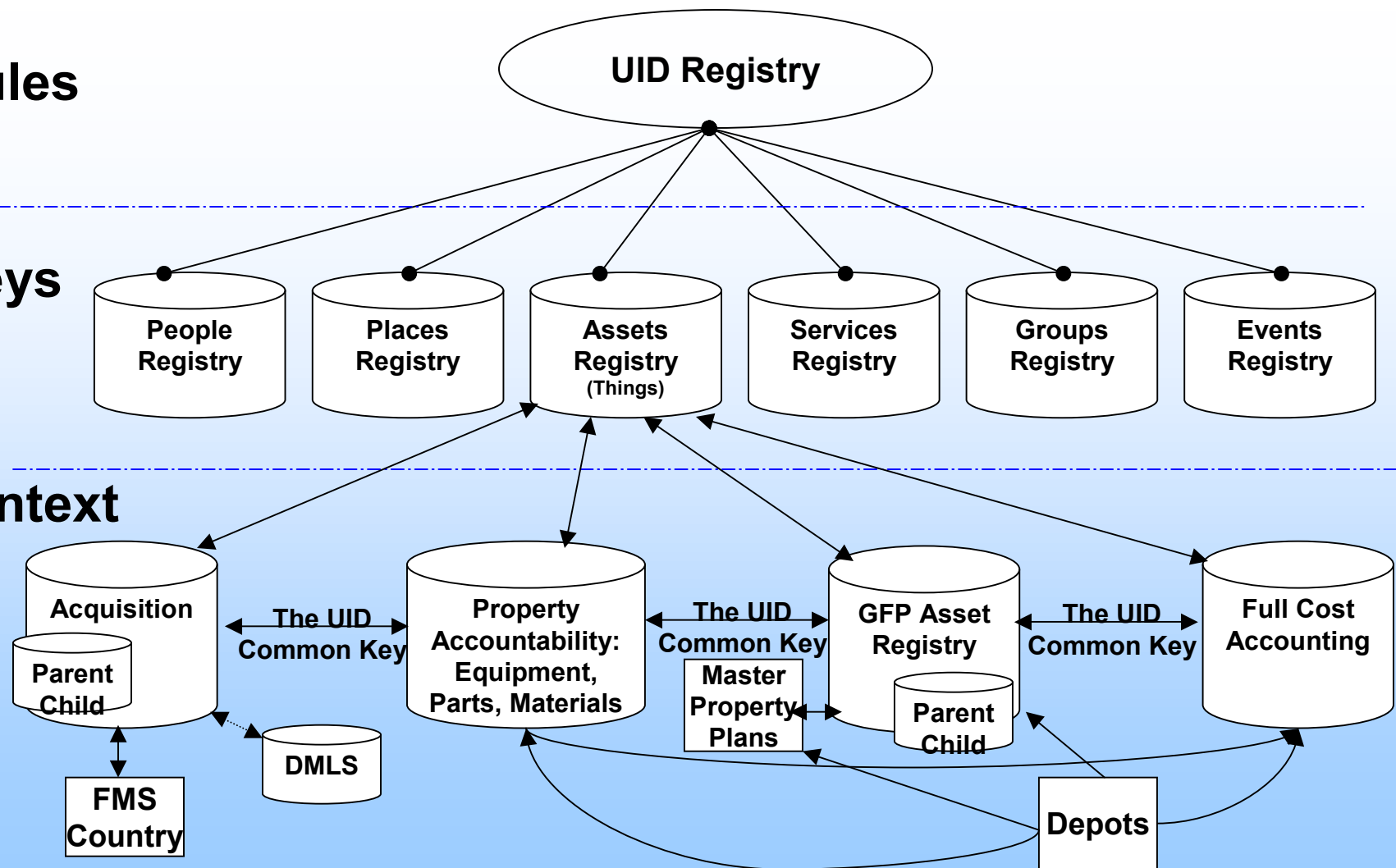


UID Registry Concept

Rules

Keys

Context



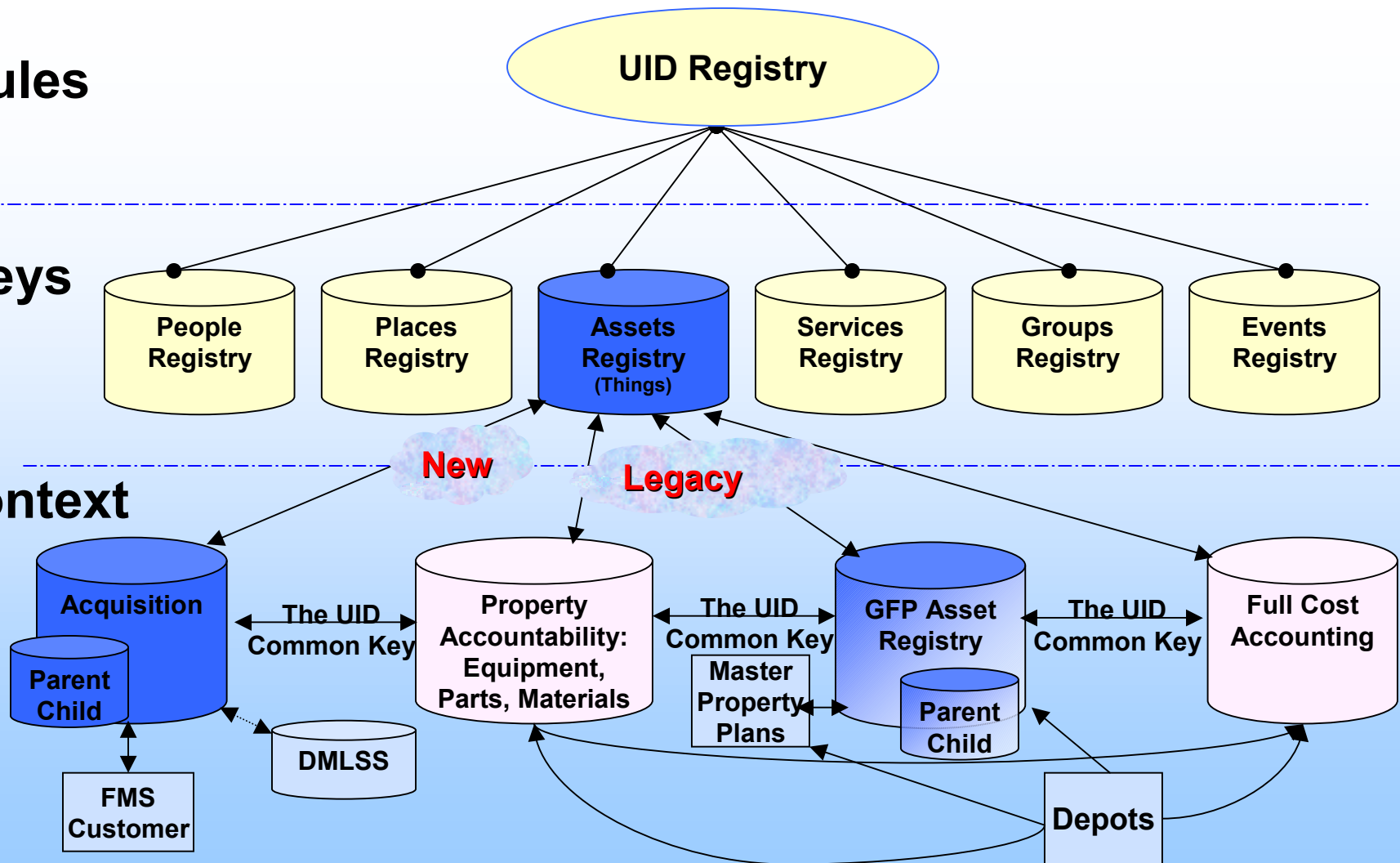


UID Registry Concept

Rules

Keys

Context





GFP Registry Concept

- 100% GFP UIDed for Asset Accountability & Valuation
- Track UID Items in Contractor Custody
- GFP Marked with UID by Issuing Source

GFP Items

- By Company
- By Program

Contractor GFP Master Plans

GFP in Storage

- Assign Alias UID
- Mark with UID when Placed in Use

GFP in Use

- Assign Alias UID
- Mark with UID when Item Possession is transferred

GFP in GOCO

- As specified in Operating Contract

GFP Registry of Alias UIDs

- Custodian CAGE
- GFP Item UID
- Date Issued
- Date Received
- Requiring Contract Number
- Parent/Child Relationships

Industry Inputs

Government Inputs

Property Accountability Systems

UID Registry
(GFP UIDs Flagged)

Maintenance Systems

GOCO – Government-Owned Contractor-Operated



What's Next

- ◆ Registry
 - Identifying requirements for internal and external data sources
 - Identifying parameters for registry access and views
- ◆ WAWF enhancement
 - Cost type contracts
- ◆ Infrastructure support for
 - Embedded items
 - Depot UID submission
 - Error reconciliation
 - Container UID content concept
 - Submission and extraction of UID data in net-centric model

Frequently Asked Questions



By the Services

Question	Answer
Does UID apply to existing contracts or Basic Ordering Agreements?	UID applies only to new solicitations on or after January 1, 2004, not contracts in place.
All contract items delivered under a contract with a unit price of \$5,000 or more will require unique item identification marking or a DoD recognized unique identification equivalent. Are the above contract items to be listed in (c)(1)(ii) along with the embedded subassemblies, components, and parts? If not, where?	Contract items over \$5000 are not required to be listed in an RFP exhibit or CDRL unless the embedded subassemblies, components and parts are required to have a UID. The contractor will be required to list each end item UID and acquisition cost if the acquisition cost is over \$5000 as well as the items that have been specified by the Department in the exhibit or CDRL.
Does the UID apply to a small business with less than 50 employees?	Yes, the UID policy and DFARS clause applies to all DoD suppliers.
Is funding being provided to implement this new requirement?	At the current time there are not additional funds planned for UID.
What if the item is too small to mark?	Bag and tag, in accordance with MIL-STD-129, MIL-STD-130.



By Industry

Question	Answer
Will waivers or exceptions to UID be granted?	The rule is considered to be a strategic imperative, necessary to efficiently move supplies to warfighters. No waivers or exceptions can be granted.
Will UID apply to classified items?	Yes.
Will UID apply to Foreign Military Sales?	Yes.
Is commercial software considered an item?	For purposes of unique identification and valuation, software, manuals, and other forms of information are not considered to be items. The definition of item is a single hardware article or unit formed by a grouping of subassemblies, components, or constituent parts.
Will the UID replace the NSN?	No.
Do legacy parts need to be marked?	Yes. Policy is being drafted for legacy.

Exhibits and Reception